

**IOWA DEPARTMENT OF NATURAL RESOURCES
ADMINISTRATIVE ORDER**

IN THE MATTER OF:

**BRUSH & WEED CONTROL
SPECIALISTS, INC. AND
NEW FARMERS DRAINAGE DISTRICT**

**ADMINISTRATIVE ORDER
2008-WW- 08**

To: Brush & Weed Control Specialists, Inc. Donald Reffer, Registered Agent 1108 230th St. Algona, IA 50511	New Farmers Drainage District Attn. Karen Havemen 610 Iowa Ave. Onawa, IA 51040
--	--

I. SUMMARY

Under the terms of this order, New Farmers Drainage District (NFDD) and Brush & Weed Control Specialists, Inc. (BWCS) are required to compensate the Iowa Department of Natural Resources (Department) for damages as the result of fish killed due to the misapplication of herbicides by BWCS to a water of the state owned and controlled by NFDD. Each party is also assessed an administrative penalty as a result of state law violations resulting in a fish kill.

For further details, see Division V below.

Any questions regarding this order should be directed to:

Relating to technical requirements:

Dan Stipe
Iowa Department of Natural Resources
Field Office #4
Atlantic, Iowa 50022
Ph: 712/243-1934

Relating to appeal rights:

David Womson, Attorney
Iowa Department of Natural Resources
Henry A. Wallace Building
Des Moines, Iowa 50319-0034
Ph: 515/242-5817

II. JURISDICTION

This Order is issued pursuant to Iowa Code section 455B.175(1) which authorizes the Director to issue any order necessary to secure compliance with or prevent a violation of Iowa Code Chapter 455B, Division III, Part 1, and the rules promulgated or permits issued pursuant thereto. Iowa Code sections 481A.158 and 455B.392(1)"c" authorize the assessment and recovery of damages to natural resources. Iowa Code section 455B.109 and agency rules in Chapter 567 IAC 10 authorize the Director to assess administrative penalties up to \$10,000.

**IOWA DEPARTMENT OF NATURAL RESOURCES
ADMINISTRATIVE ORDER
BWCS AND NFDD**

III. STATEMENT OF FACTS

1. The NFDD is a governmental entity organized under the provisions of Iowa Code Chapter 468. NFDD manages and controls a drainage ditch (formerly known as Garretson Outlet Ditch) located in Monona County, Iowa which is the subject of this order. The drainage ditch is a water body that maintains flow throughout the year or contains sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community. NFDD contracted with BWCS to control vegetation, primarily arrowhead plants, growing in water within the drainage ditch by application of a herbicide as further described in this order.
2. BWCS is an Iowa registered corporation. BWCS is licensed by the Iowa Department of Agriculture and Land Stewardship (IDALS) as a commercial pesticide applicator pursuant to license number 144-000.
3. On August 30, 2007, Department field office staff Matt Rhodes and Dan Olson responded to a report of a fish kill in the NFDD drainage ditch in Monona County, Iowa. The staff conducted an investigation and observed dead and dying fish along an approximate 6.9 mile segment of the ditch between section 11, T84N, R45W and section 16, T85N, R45W. Along with photos taken at the time, Department staff noted a distinct citrus smell and an accumulation of a foamy "mayonnaise type" material along the ditch. The staff took water samples at a point near where the ditch intersects with 110 St. which is near the headwaters of the ditch. Downstream water samples were taken at a point where the ditch intersects 150th St. and where the ditch discharges into the West Fork of the Little Sioux River. Laboratory results showed that the levels of glyphosate from the upstream headwater sample were < 5 parts per billion (ppb), 300 ppb at the 150th street location and 430 ppb at the downstream point where the ditch discharges to the West Fork of the Little Sioux River.
4. On August 31, 2007 a Department fisheries biologist and other staff investigated and located an employee of BWCS, Troy Fox, who was applying a herbicide along the NFDD ditch for the stated purpose of controlling aquatic vegetation within the ditch. Mr. Fox confirmed that the herbicide was a product known as AquaNeat mixed with an adjuvant known as I'VOD which had a distinct citrus smell. The Department staff instructed the applicator to cease spraying which he did and informed him of the observed fish kill.
5. Mr. Fox informed staff that he had spent all of the previous day, Thursday, March 30, 2008, spraying vegetation within the ditch and that he had not observed dead or dying fish. Mr. Fox later confirmed that he began spraying the ditch on Tuesday, March 28, 2008. Department staff took a water sample from the ditch at the location where Mr. Fox had been spraying, approximately 2700 feet north of the intersection of K64 and 130th St. The result showed 320 ppb glyphosate. An upstream sample at a location near 110th St. showed glyphosate at < 5 ppb. The Department staff observed dead or dying fish along the downstream stretch of the drainage ditch and the accumulation of a foamy "mayonnaise" type material with a distinctive citrus odor. The staff decided to wait a day before initiating a fish kill count. A water sample from the ditch was taken near the 150th St. bridge and tested with a digital meter for dissolved oxygen. The result was 0.23 ppm of dissolved oxygen.

**IOWA DEPARTMENT OF NATURAL RESOURCES
ADMINISTRATIVE ORDER
BWCS AND NFDD**

6. On Saturday, September 1, 2007 the Department fisheries staff conducted a dead fish count assessment in accordance with Department procedure and administrative rules. An estimate of the number, type and value of dead fish, as well as the Department's investigatory costs, is summarized in the attached Exhibit A.

7. The Department's investigation concluded that the most likely cause of the fish kill was due to oxygen depletion resulting from the misapplication of the Aqua Neat over vegetation and water in the NFDD ditch. The Department does not preclude the possibility that the fish kill may be attributed to additional causes associated with the misapplication of the herbicide. The Department does not believe the fish kill was due solely to natural causes.

8. Alternative methods of application, application of alternative herbicides and proper application of the Aqua Neat according to labeled instructions would not have resulted in a fish kill.

9. IDALS staff conducted an investigation of the spraying incident pursuant to IDALS authority to regulate the commercial application of pesticides and herbicides. Mr. Fox, employed by BWCS, signed an affidavit stating that he had applied Aqua Neat (EPA No. 228-365) with a surfactant on 4 occasions beginning August 28 until August 31, 2007. The affidavit stated that he had applied Aqua Neat to vegetation within the ditch over three segments in an upstream direction on one side of the ditch and in a downstream direction on the opposite side of the ditch. The label for Aqua Neat allows application over water but it must be applied in an upstream application to avoid over concentration.

10. BWCS and IDALS entered into a "Joint Stipulation" No. 08.0122 which makes a finding that BWCS applied Aqua Neat while traveling downstream in violation of the labeling requirements and therefore Iowa Code section 206.11(3)(b). BWCS agreed to pay a civil penalty of \$1,420.

11. The misapplication of Aqua Neat by an employee of BWCS to the NFDD caused the fish kill as described above.

IV. CONCLUSIONS OF LAW

1. Iowa Code section 455B.175 authorizes the director of the Department to issue an order to any "person" determined to be in violation of that part.

2. Iowa Code section 455B.186 prohibits the discharge of a pollutant into waters of the state unless the discharge is pursuant to a permit issued by the Director of the Department. The misapplication of the herbicide "Aqual Neat" containing glyphosate by BWCS which resulted in a fish kill constitutes a "pollutant" as defined in Iowa Code section 455B.171(18). The NFDD drainage district is a "water of the state" as defined in Iowa Code section 455B.171(37).

3. Iowa Code section 455B.173 authorizes the Environmental Protection Commission (EPC) to adopt rules applicable to water quality and permitting of discharges to water of the state. The EPC has adopted rules in Chapter 567 IAC 61. Specifically, paragraph 567 IAC 61.3(1)"a" requires that all surface waters be free from "...substances attributable to wastewater discharges or agricultural

**IOWA DEPARTMENT OF NATURAL RESOURCES
ADMINISTRATIVE ORDER
BWCS AND NFDD**

practices in concentrations or combinations, which are acutely toxic to human, animal, or plant life." The misapplication of the herbicide Aqua Neat by BWCS resulting in a fish kill constitutes a violation of this rule.

4. NFDD is a "person" as defined in Iowa Code section 455B.171(16) who has violated EPC rules as stated above and whose actions caused an unpermitted discharge of pollutants to water of the state resulting in a fish kill in that it contracted with BWCS for the application of herbicide within the drainage ditch it owns and controls. BWCS is a "person" as defined who has violated EPC rules as stated above and discharged a pollutant to water of the state in that its employee misapplied a herbicide resulting in a fish kill.

5. Iowa Code section 455B.392(1)"c" provides that a "...person having control of a hazardous substance is strictly liable to the state..." for reasonable damages to the state for "...injury to, destruction of, or loss of natural resources resulting in a hazardous condition...". Damages include the costs of investigation and assessment of those damages. The Department has adopted rules applicable to the assessment of natural resource damages in 567 IAC 133.6.

6. The herbicide glyphosate when misapplied constitutes a "hazardous substance" as defined in Iowa Code section 455B.381(5) and the misapplication of Aqua Neat by BWCS constitutes a "hazardous condition" as defined by Iowa Code section 455B.381(4). BWCS as the applicator and NFDD as the owner in control of vegetation control within the drainage district are persons having control of a hazardous substance whose actions caused a fish kill.

7. Iowa Code section 481A.151 provides that any person who is liable for polluting water of the state in violation of state law shall be required to pay restitution for injury to wild animals. This section authorizes the Iowa Natural Resources Commission (NRC) to adopt rules applicable to the method for calculating restitution assessments and authorizes the Department to recover these restitution assessments through contested procedures under Iowa Code Chapter 17A. The NRC has adopted these rules in Chapter 571 IAC 113.

8. In accordance with Chapter 571 IAC 113 and EPC rule 567 IAC 133.6, the Department has calculated the monetary value for loss of fish resulting from the illegal application of herbicides by BWCS including the Department's investigatory and assessment costs. The total cost is \$14,732.89 as specified in the attached Exhibit A.

V. ORDER

THEREFORE, the Department orders BWCS and NFDD to do the following:

1. BWCS shall pay to the order of the "Iowa Department of Natural Resources" the amount of \$14,732.89 as restitution for the loss of fish and investigatory costs as described in this order. Payment shall be made no later than May 9, 2008.

**IOWA DEPARTMENT OF NATURAL RESOURCES
ADMINISTRATIVE ORDER
BWCS AND NFDD**

2. BWCS and NFDD are jointly and severally responsible to pay \$5,000 as part of the gravity assessment of the Department's administrative penalty amount. BWCS shall pay an additional culpability assessment of \$4,000. NFDD shall pay a culpability assessment of \$1,000. See Division VI., below. Payment shall be made by check payable to the order of the "Iowa Department of Natural Resources" no later than June 13, 2008.
3. NFDD will notify the Department field office located in Atlantic at least 72 hours prior to application of herbicides within the drainage district for the years 2008 and 2009.

VI. PENALTY

1. Iowa Code section 455B.109 authorizes the EPC to establish by rule a schedule for assessment of administrative penalties up to \$10,000. The EPC has adopted this schedule with procedures and criteria for assessment of penalties. See Chapter 567 IAC 10. Pursuant to this chapter, the Department has determined that the most effective and efficient means of addressing the above-cited violations is through an administrative order with a penalty. Although the water quality violation and the unpermitted discharge to water of the state may be considered separate violations for purposes of the \$10,000 statutory limit, the Department is treating them in this case as a single violation since they occurred as part of the same incident. Each day of application of the herbicide constitutes a separate violation for purposes of the \$10,000 statutory limitation. Applying a strict per violation assessment as provided below, the assessment would exceed the \$10,000 limitation. Therefore, the Department is assessing the maximum \$10,000 penalty.

BWCS has paid a civil penalty of \$1,420 to the IDALS pursuant to IDALS regulatory authority based on the failure to apply this herbicide in accordance with the manufacturer's labeling. The water pollution violation resulting in a fish kill is a separate and distinct violation and the IDALS penalty assessment does not preclude assessment of a separate penalty in this case.

NFDD is assessed a penalty based on its strict liability for contracting with BWCS for its services which violated EPC rules as stated above. The penalty rationale is summarized below.

ECONOMIC BENEFIT: The herbicide Aqua Neat can be applied in a manner that would not result in a fish kill. It would require smaller applications over a longer period of time. There are other herbicides available that result in a slower process of controlling vegetation and would not result in such an acute depletion of oxygen as Aqua Neat. A common practice would be to apply the herbicide over small segments and allowing more time for oxygen to regenerate before subsequent applications. Application during times of cooler weather would also reduce the chance of oxygen depletion and a fish kill. Use of chemicals which do not kill vegetation so quickly could have been used. Other best management methods such as periodic dredging would increase stream flow and control vegetation growth and oxygen depletion. The most obvious method of avoiding oxygen depletion and fish kills would have been to apply the herbicide over smaller segments with appropriate separation distances and over a longer period time. The cost savings in this case would represent the additional mobilization costs involved with a greater number of applications over a longer period of time. The Department reserves discretion to assess for this factor upon receipt of additional information.

**IOWA DEPARTMENT OF NATURAL RESOURCES
ADMINISTRATIVE ORDER
BWCS AND NFDD**

GRAVITY: NFDD contracted with a commercial herbicide applicator, BWCS, as part of its drainage ditch management whose actions resulted in a major fish kill. The misapplication of herbicide occurred over a period of 4 days but the Department is treating them as 3 full days of misapplication. The fish kill constitutes a substantial loss of Iowa's natural resources. Applying \$3,000 for a single violation for each of the 3 days, \$9,000 is assessed for this violation. Given the \$10,000 statutory limitation, a gravity assessment of \$5,000 is applied jointly and severally to NFDD and BWCS.

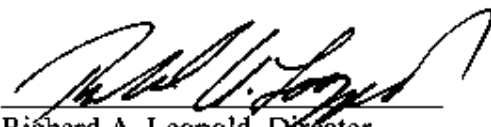
CULPABILITY: BWCS knew or should have known that application of this type of herbicide over water could result in a fish kill, especially under the hot weather conditions. BWCS should have taken special care in the application of a herbicide control method under these conditions. Applying \$3,000 for a single violation for each of the 3 days, \$9,000 is assessed for this factor. Given the \$10,000 statutory limitation, BWCS is assessed \$4,000 for this factor. Although NFDD is strictly liable for the violation, NFDD had no active participation in the application itself although they were in the position to require precautions in the timing and terms of its contract with BWCS. NFDD is assessed \$1,000 for this factor.

VII. APPEAL RIGHTS

Iowa Code section 455B.175 and 561 IAC 7.5(1), as adopted by reference in Chapter 567 IAC 7, provide that this order may be contested by filing a written notice of appeal within thirty days of receipt of this order. The notice of appeal shall be filed with the director of the Department with a copy sent to the Bureau Chief, Legal Services Bureau, Department of Natural Resources, 502 East 9th St., Des Moines, Iowa 50319.

VIII. NONCOMPLIANCE

Failure to comply with this order may result in the imposition of further administrative enforcement and assessment of penalties or referral to the Attorney General to obtain appropriate relief in Iowa District Court pursuant to Iowa Code sections 455B.191 and 455B.391. Compliance with Division "V. Order" of this order constitutes full satisfaction of all requirements pertaining to the violations described in Division "IV. Conclusions of Law" of this order.


Richard A. Leopold, Director
Iowa Department of Natural Resources

Dated this 7 day of April, 2008

Brush & Weed Control Specialists, Inc., DWomson, BWCS, NFDD, FO 4, IC(1),

EXHIBIT A
FISH KILL INVESTIGATION AND ASSESSMENT

Fish Killed:

<u>SPECIES</u>	<u>NUMBER KILLED</u>	<u>MONETARY VALUE</u>
Shiners, Minnows	43,916	\$3952.40
Bullheads	13,629	\$6719.28
Carp	7,900	\$857.19
Green Sunfish	2,131	\$861.92
Total	67,576	\$12,390.79

Expenses for fish kill – New Farmer Ditch (Garretson Outlet Ditch), Monona County,
Aug 31 and Sep 1, 2007.

<u>Investigation time:</u>	<u>Hourly Rate</u>	<u>Hours</u>	<u>Total</u>	<u>@ .128 % overhead</u>
Lannie Miller	29.52	18.0	531.36	\$599.37
Don Herrig	23.71	18.0	426.78	\$481.41
Van Sterner	27.44	14.0	384.16	\$433.33
Royce Bowman	16.72	14.0	234.08	\$264.04
Todd Perry	10.02	9.0	90.18	\$101.72
Daniel Vogeler	11.02	7.0	77.14	\$87.01
				\$1,966.88

<u>Expenses</u>	<u>Aug 31, 2007</u>		<u>Sep 1, 2007</u>	<u>Total</u>
	<u>Meals</u>		<u>Meals</u>	
Lannie Miller	8.00		8.00	\$16.00
Don Herrig	8.00		8.00	\$16.00
Van Sterner	8.00		8.00	\$16.00
Royce Bowman	8.00		8.00	\$16.00
Todd Perry	8.00			\$8.00
Daniel Vogeler	8.00			\$8.00
				\$80.00

<u>Data Entry/Report</u>	<u>Hourly Rate</u>	<u>Hours</u>	<u>Total</u>	<u>@ .128% Overhead</u>
Don Herrig	23.71	5.0	118.55	\$133.72

Vehicle Mileage:	Date	Miles	Mileage		Total
	08/31/07	235	.34		\$79.90
	09/01/07	240	.34		\$81.60
	Total				\$161.50

Fish Total	\$12,390.79
Expenses Total	\$2,342.10
GRAND TOTAL	\$14,732.89